

FIG. 1A

FIG. 1B is a perspective view of the assembly 100 in an exploded view, showing the components 101, 110, 116, 106, 105, 107, 120, 50, and 100.

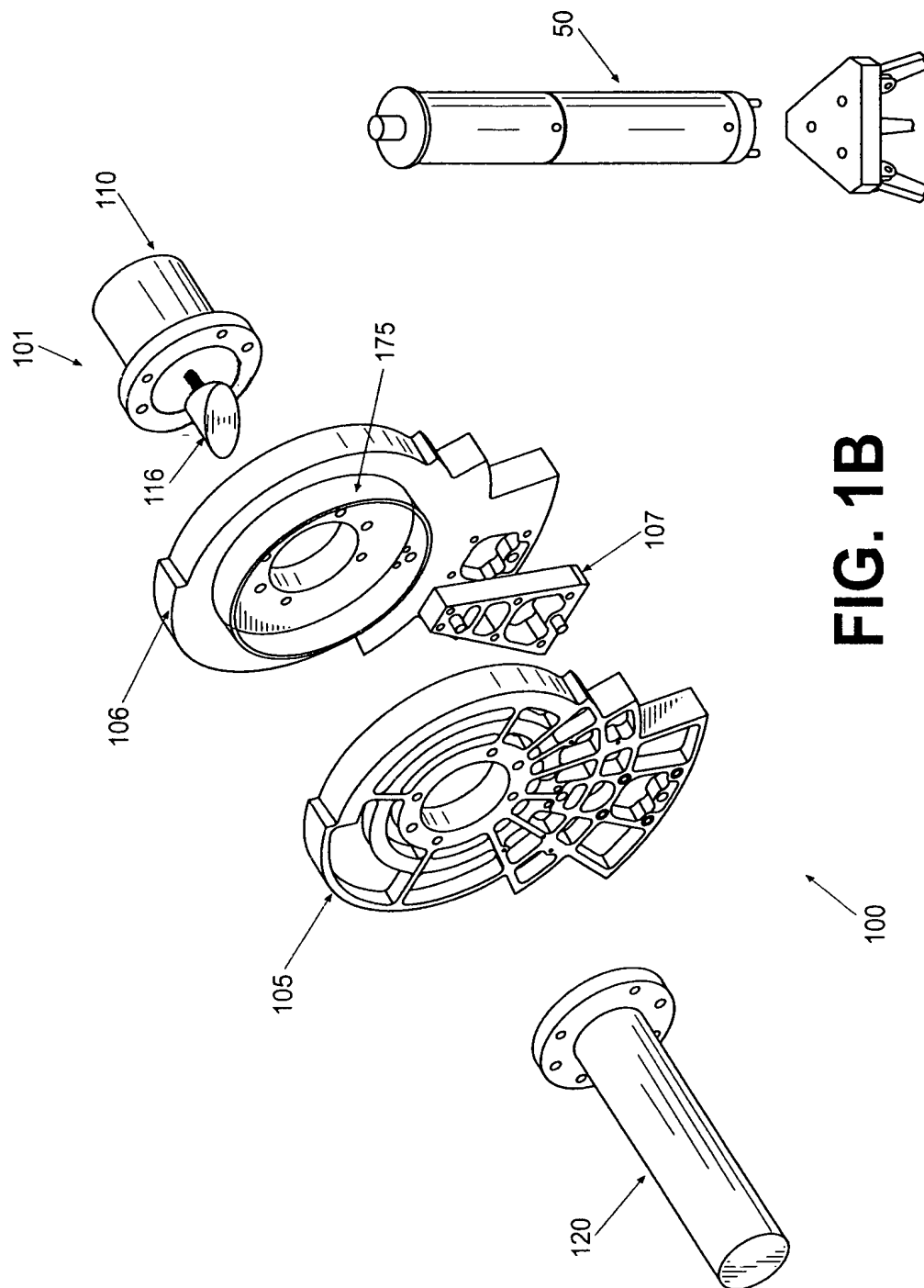


FIG. 1B

FIG. 2A is a schematic diagram of a scanning system 100. The system includes a light source 20, a scan motor controller 25, a scan motor 110, a sweep motor controller 135, and a sweep motor 145. The light source 20 emits a beam of light 162 that passes through a lens 111 and a mirror 116. The beam is reflected by the mirror 116 and passes through a series of mirrors 122, 124, and 126. The beam is then directed to a detector 150. The scan motor 110 is connected to the scan motor controller 25 and is used to rotate the mirror 116. The sweep motor 145 is connected to the sweep motor controller 135 and is used to rotate the mirror 122. The system is shown in a cross-sectional view, with the light source 20 at the top and the detector 150 at the bottom. The scan motor 110 and sweep motor 145 are shown in a side view, with the scan motor 110 at the top and the sweep motor 145 at the bottom. The scan motor controller 25 and sweep motor controller 135 are shown in a block diagram, with the scan motor controller 25 at the top and the sweep motor controller 135 at the bottom. The system is labeled 100.

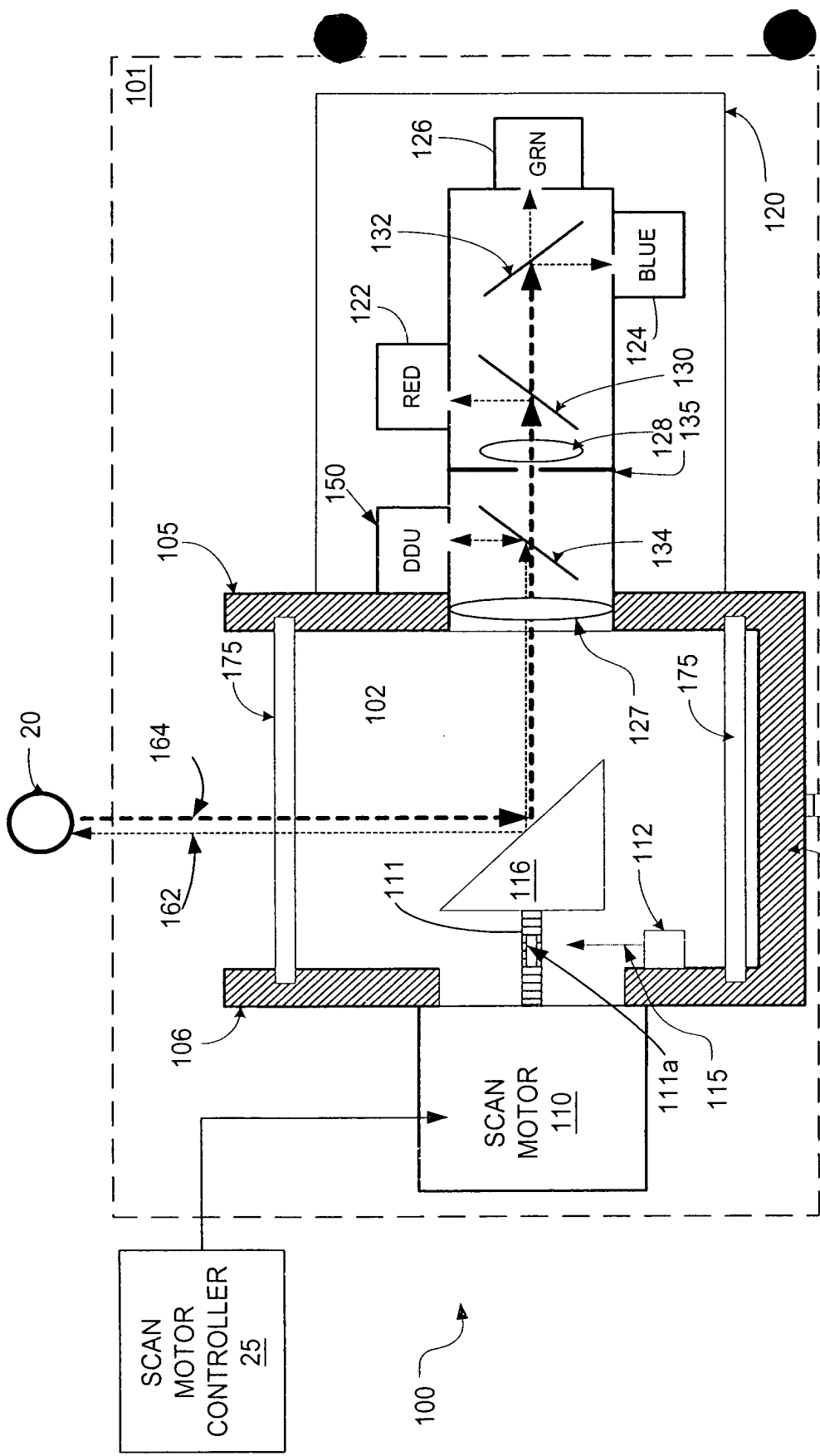


FIG. 2A

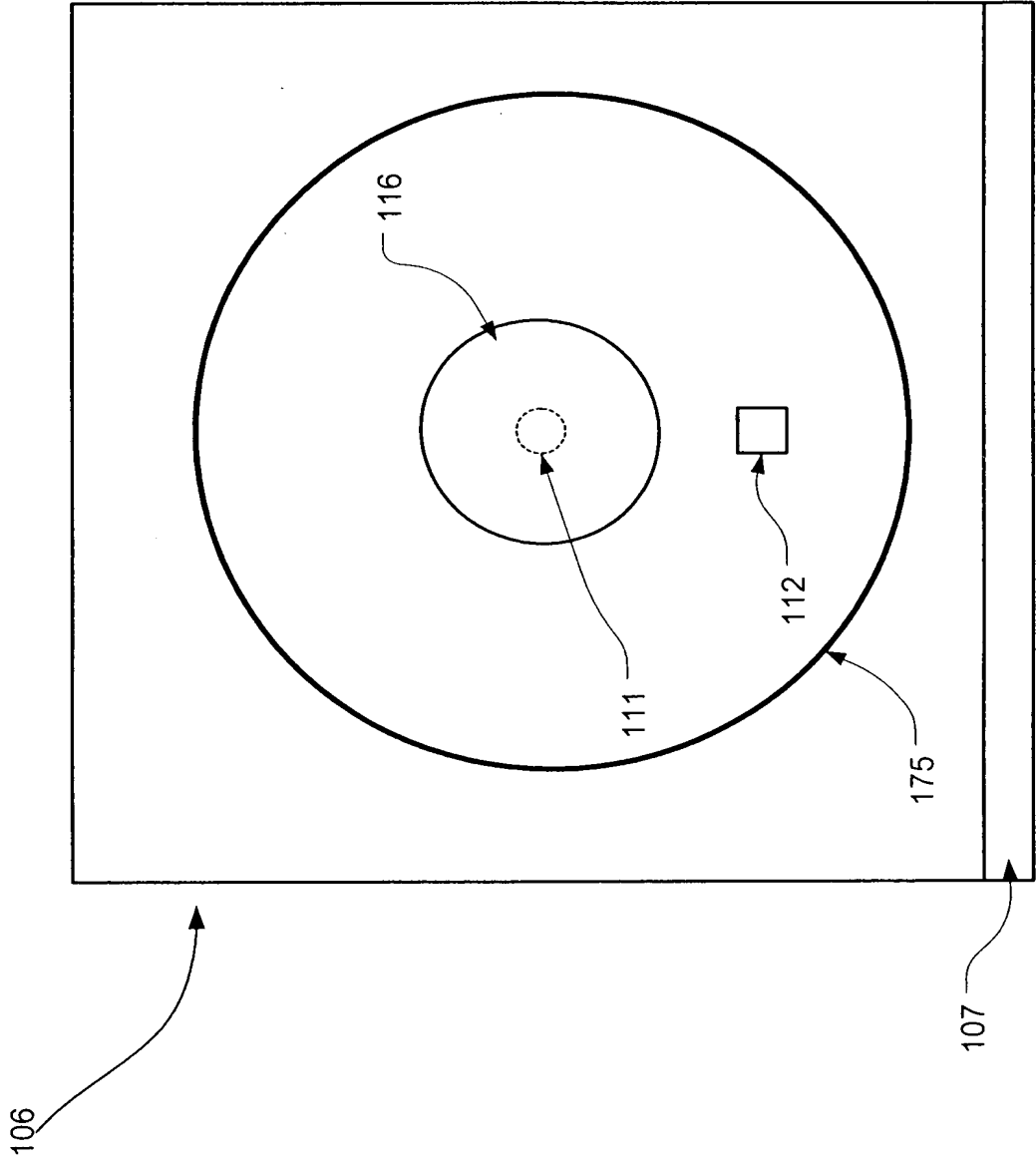


FIG. 2B

FIG. 3 is a schematic diagram of a device 100 in a first state.

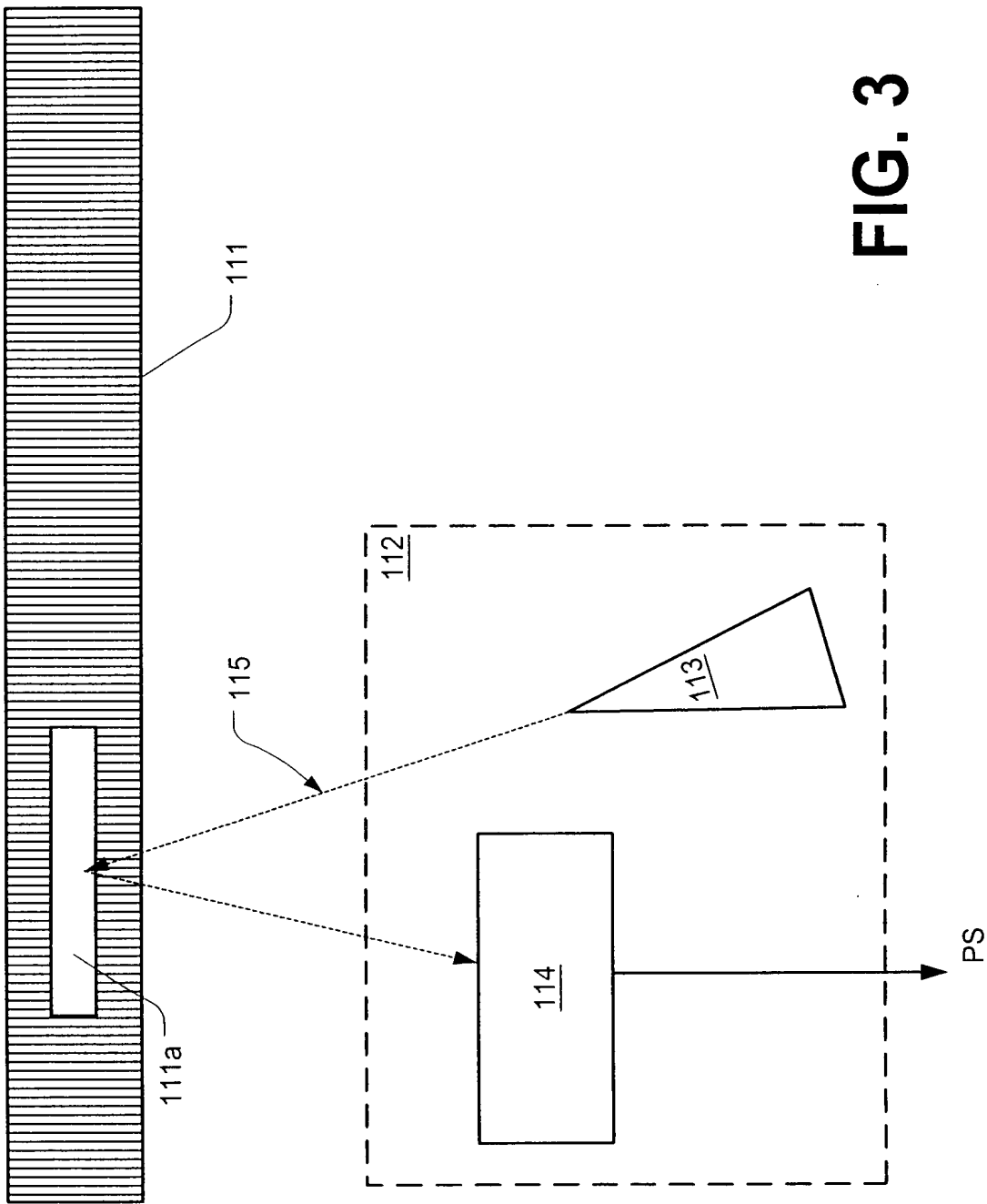


FIG. 3

FIG. 4A is a schematic diagram of a system 100 for measuring a distance between a first surface 105 and a second surface 120. The system 100 includes a light source 152, a lens 154, a detector 156, and a mirror 134. The light source 152 emits a light beam 162 that passes through the lens 154 and is reflected by the mirror 134. The reflected light beam 162 is then received by the detector 156. The distance between the first surface 105 and the second surface 120 is determined by the time of flight of the light beam 162.

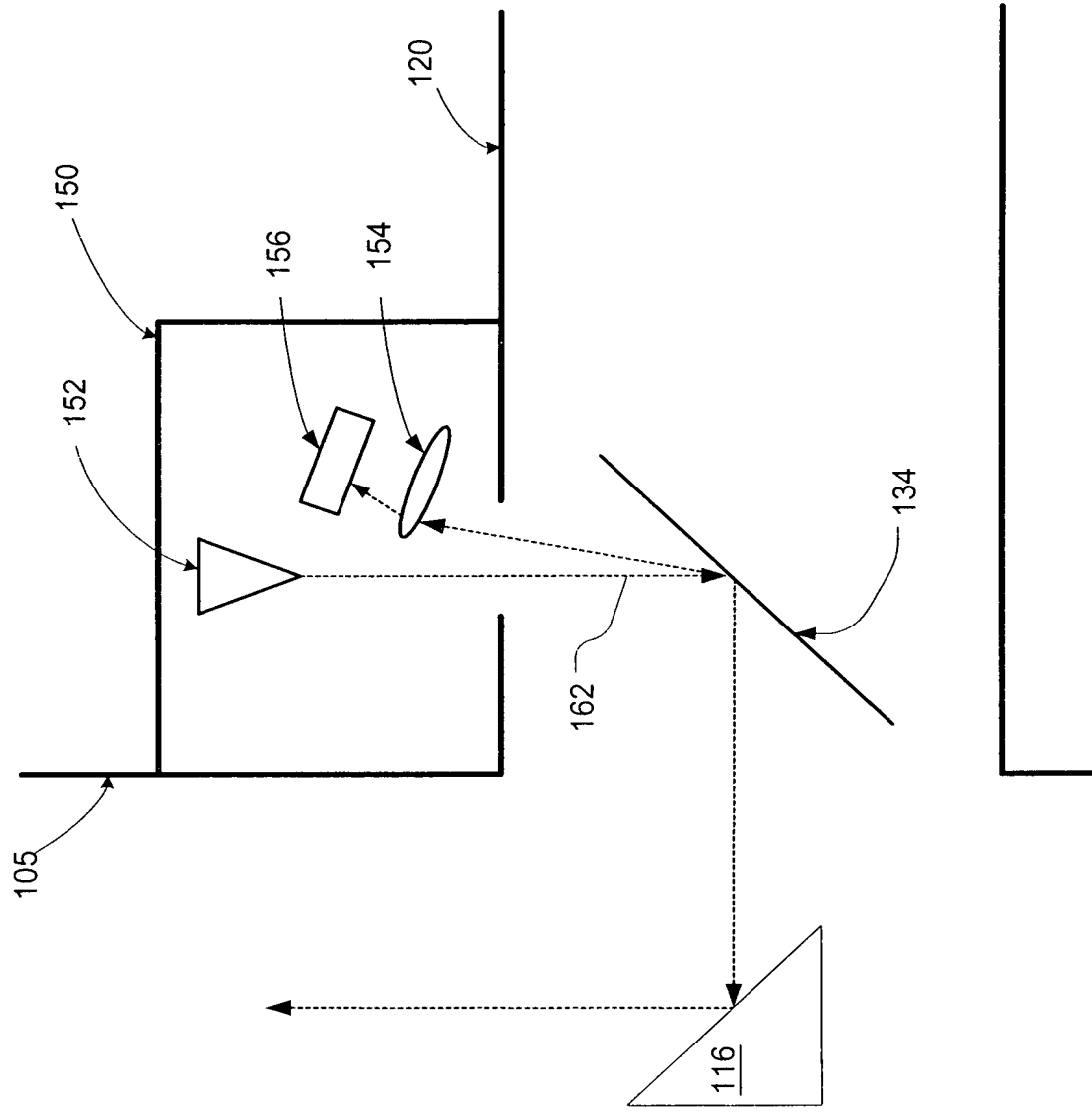


FIG. 4A

FIG. 4B is a schematic diagram of a system 20, which includes a device 101. The device 101 includes a component 116, which is connected to a component 152. The component 152 is connected to a component 156. The component 156 is connected to a component 162. The component 162 is connected to the device 101.

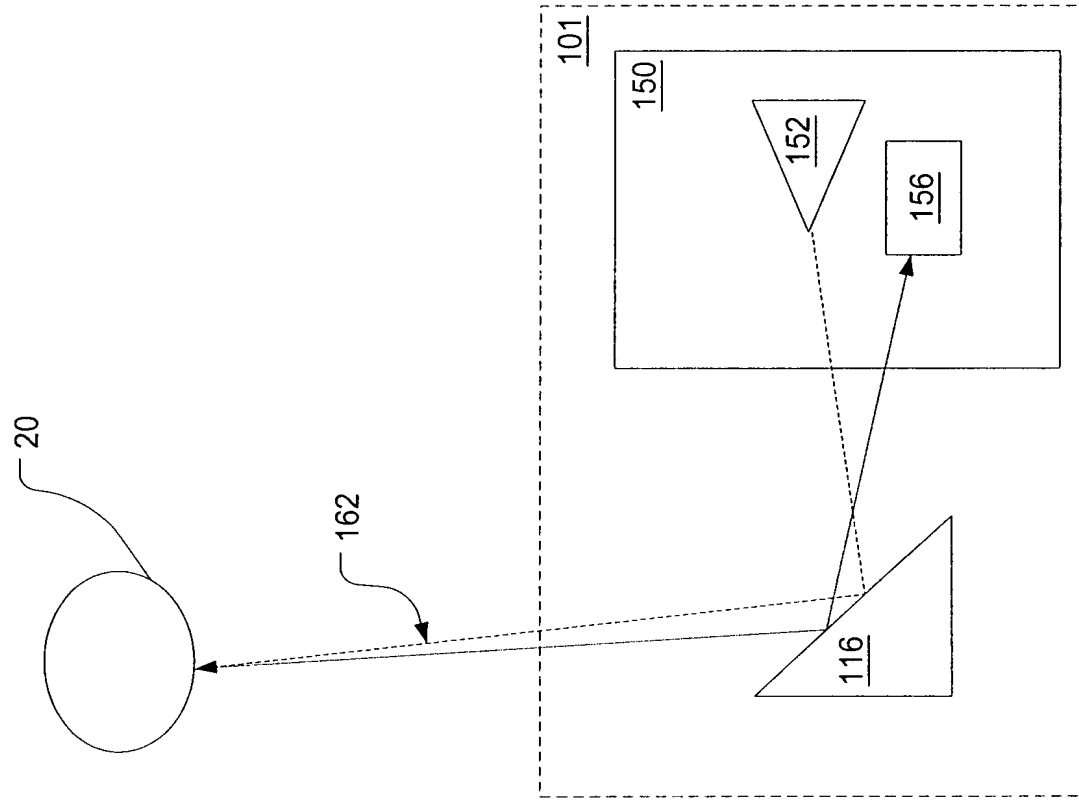


FIG. 4B

FIG. 4C is a schematic diagram of a system 100 for measuring a distance D1 between a point A and a point B. The system 100 includes a light source 152, a lens 154, and a detector 156. The light source 152 emits a beam of light 162 that passes through the lens 154 and is focused onto the detector 156. The distance D1 is the distance between the point A and the point B. The distance D2 is the distance between the point A and the lens 154. The distance D3 is the distance between the point B and the lens 154. The system 100 is used to measure the distance D1 between the point A and the point B.

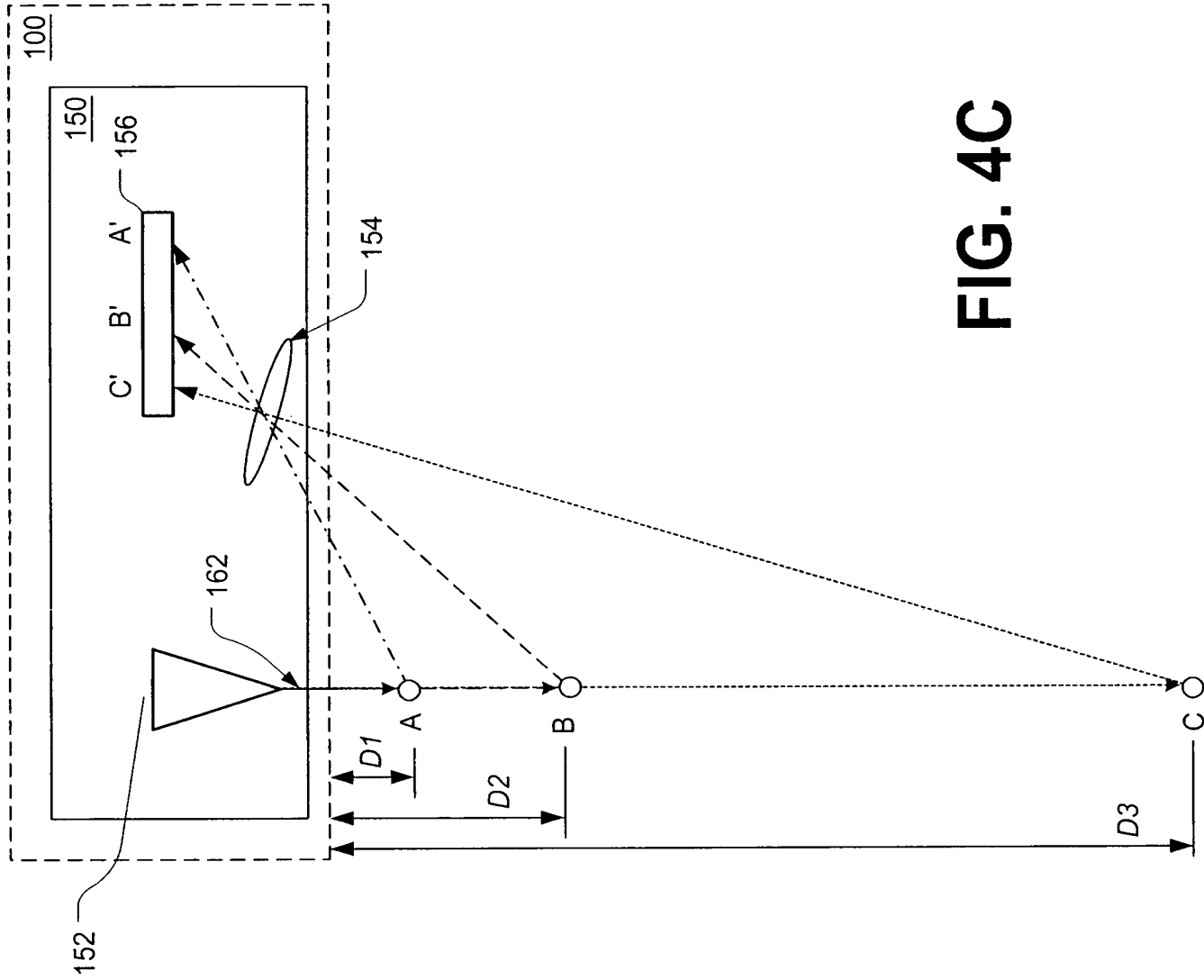


FIG. 4C

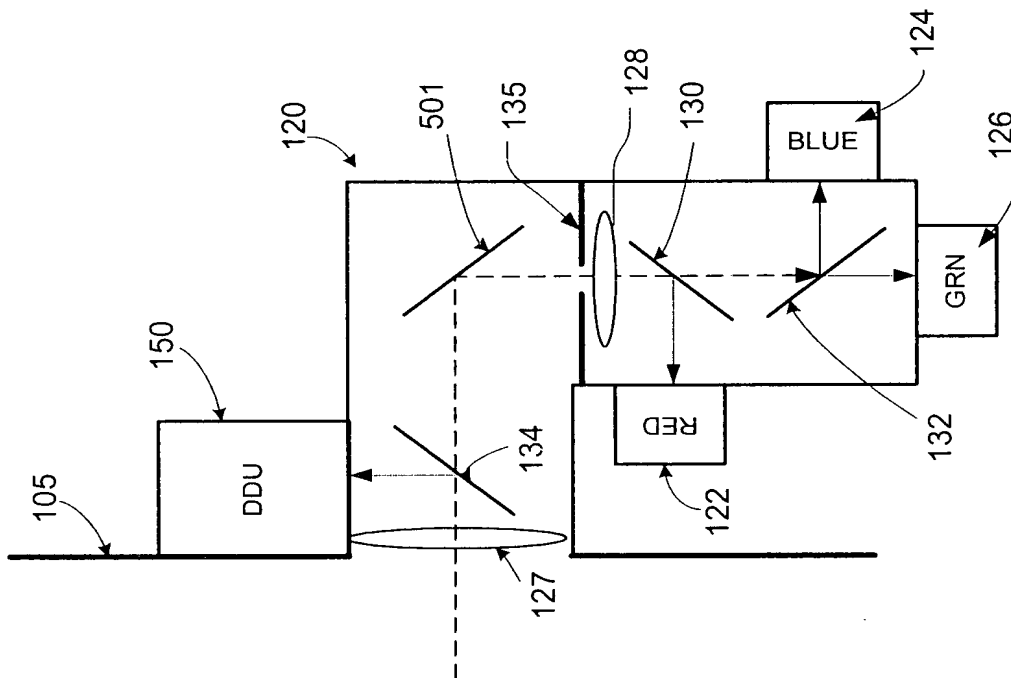


FIG. 5

FIG. 6 is a schematic diagram of a system 100 for scanning a target 162 with a laser beam 164. The system 100 includes a scan motor controller 25, a scan motor 100, a sweep motor controller 135, and a sweep motor 145. The scan motor 100 is configured to rotate a mirror 116 around a vertical axis 110, thereby scanning the laser beam 164 across the target 162. The sweep motor 145 is configured to rotate the mirror 116 around a horizontal axis 112, thereby sweeping the laser beam 164 across the target 162. The system 100 also includes a light source 150, a lens 152, a filter 154, and a detector 156. The light source 150 emits a beam of light 150 that passes through the lens 152 and the filter 154, and is reflected by the mirror 116 towards the target 162. The detector 156 is configured to detect the reflected light 150 from the target 162.

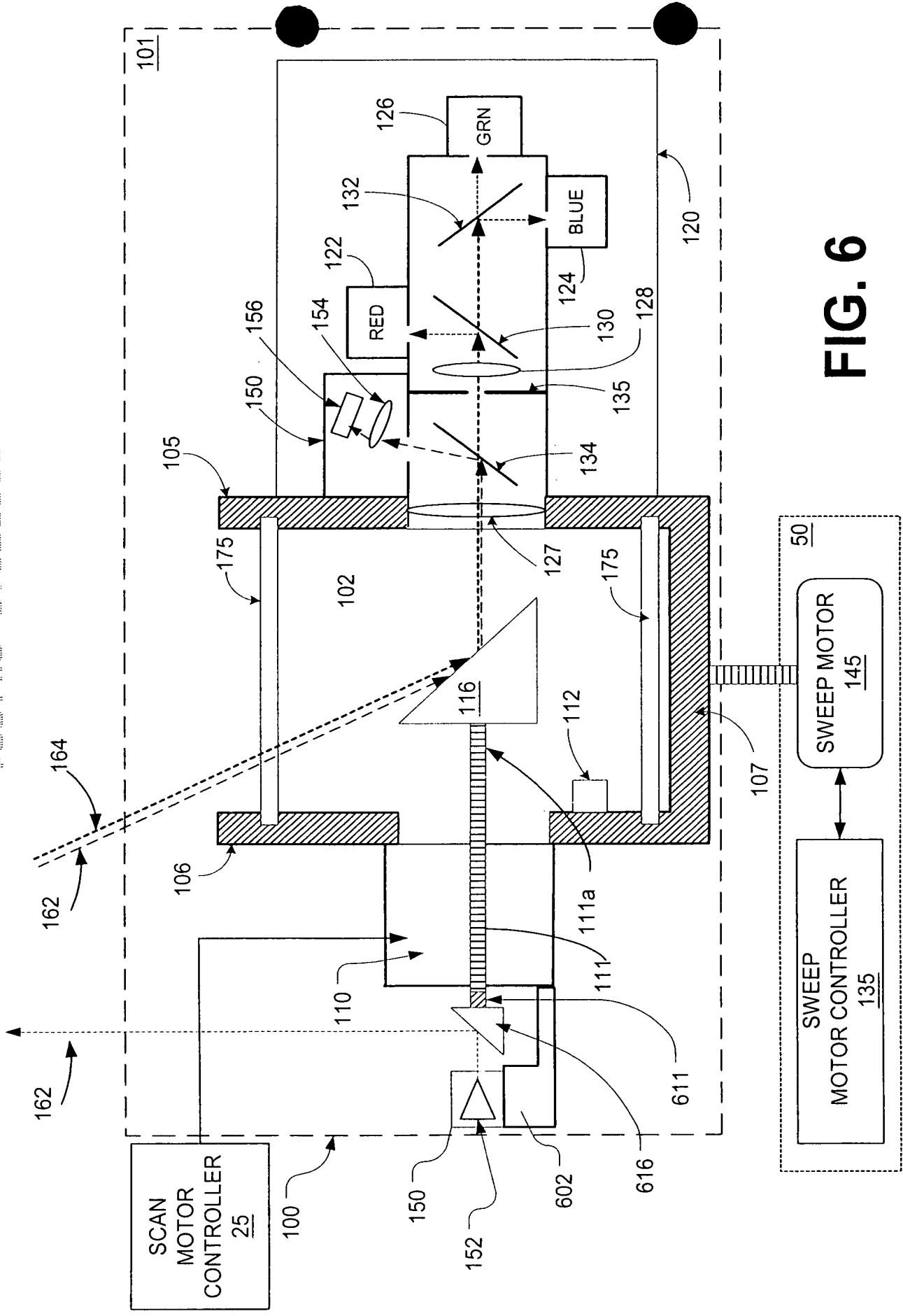


FIG. 6

FIG. 7 is a schematic diagram of a system 100 for processing data.

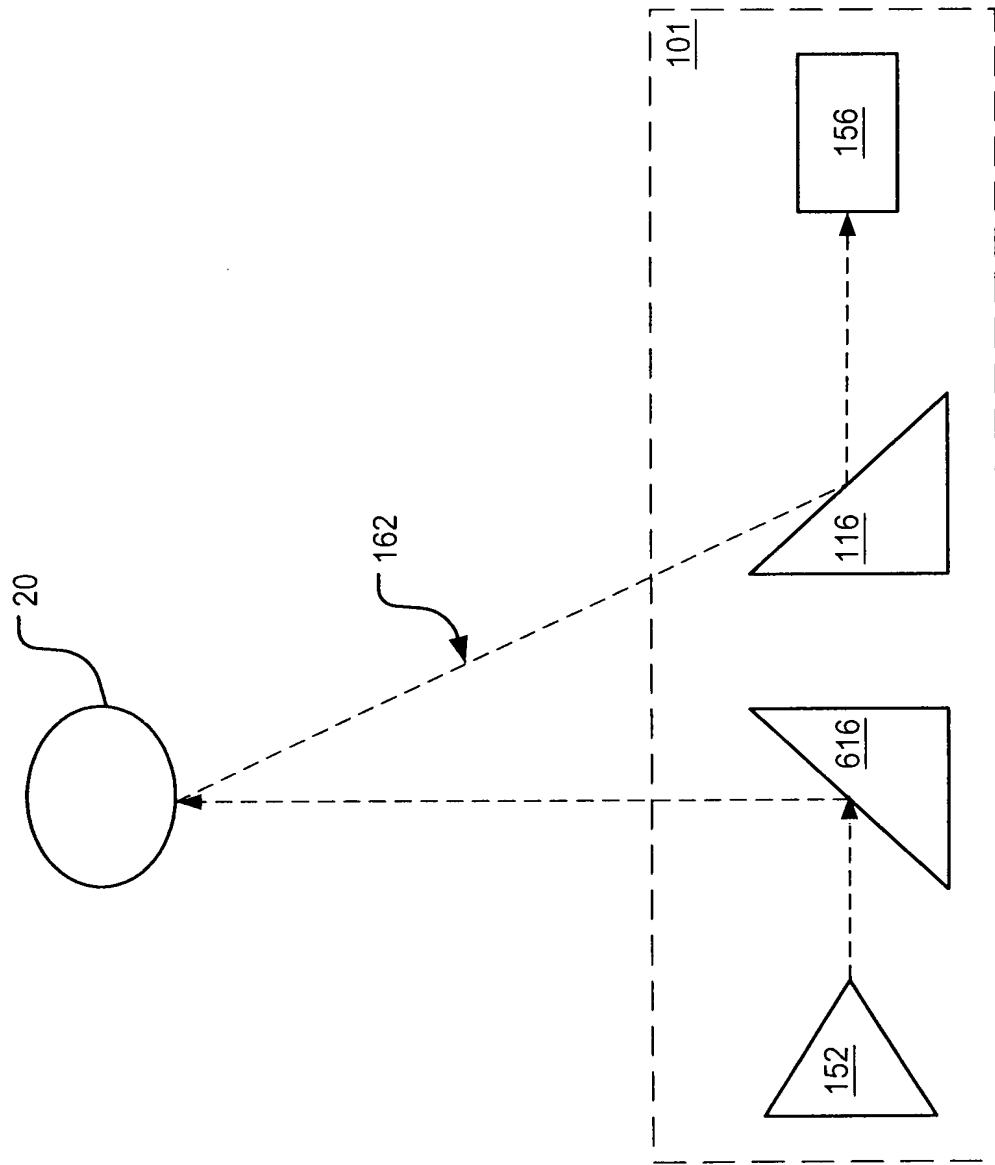


FIG. 7

FIG. 8A is a schematic diagram of an optical system 100. The optical system 100 includes a light source 105, a lens 127, a beam splitter 135, a lens 128, a beam splitter 130, a red filter 122, a blue filter 124, a green filter 126, and an imager 802. The light source 105 emits light that passes through the lens 127 and is reflected by the beam splitter 135. The light then passes through the lens 128 and is reflected by the beam splitter 130. The light is then filtered by the red filter 122, the blue filter 124, and the green filter 126. The filtered light is then imaged by the imager 802.

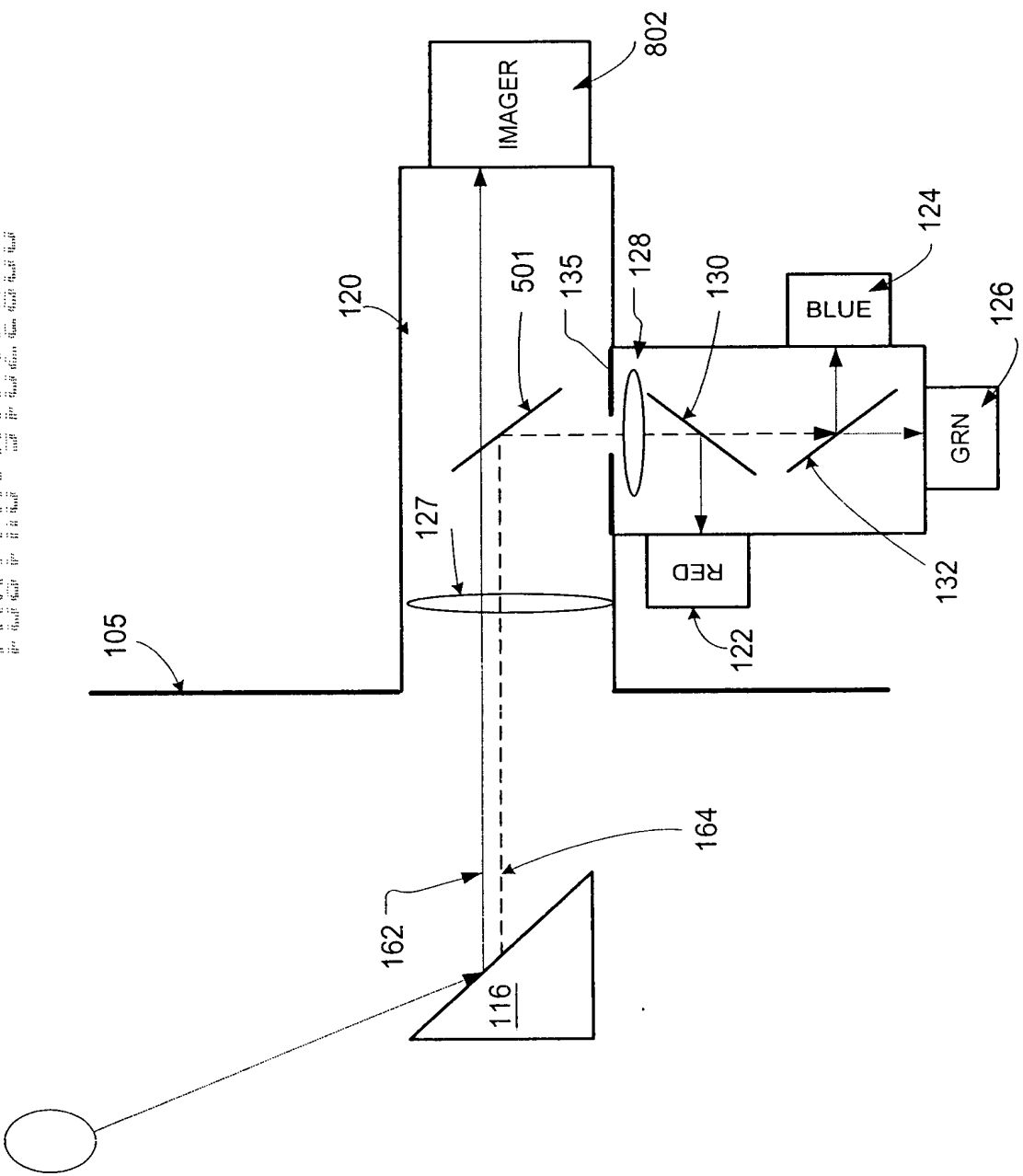


FIG. 8A

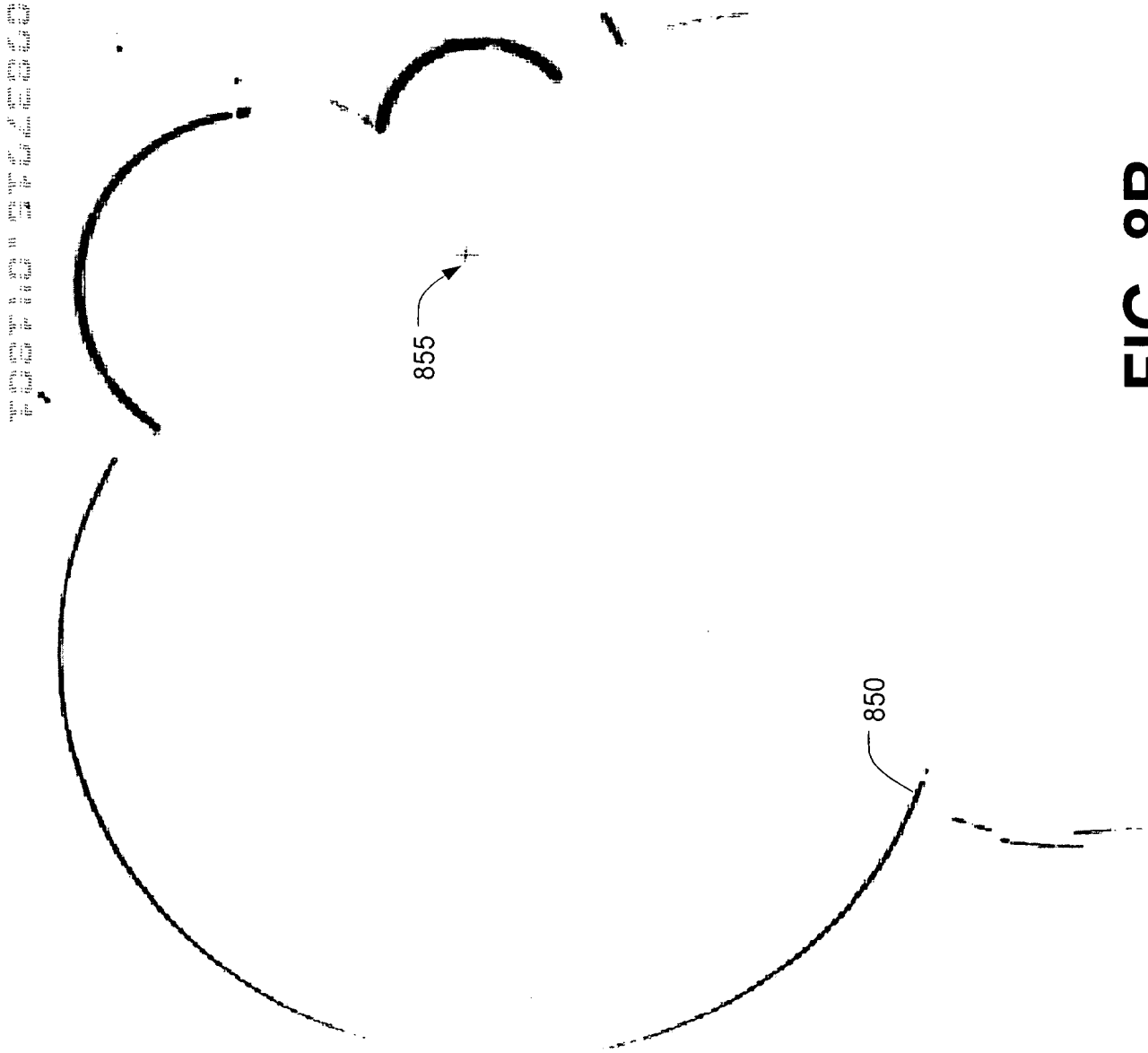


FIG. 8B

FIG. 9 is a schematic diagram of a sweep motor assembly 150. The assembly includes a sweep motor 145, a gear box 146, a ball bearing set 147, and a sweep motor controller 135. The sweep motor 145 is connected to the gear box 146, which is connected to the ball bearing set 147. The sweep motor controller 135 is connected to the sweep motor 145. The assembly is shown in a cross-sectional view, with the components labeled 135, 145, 146, 147, and 150.

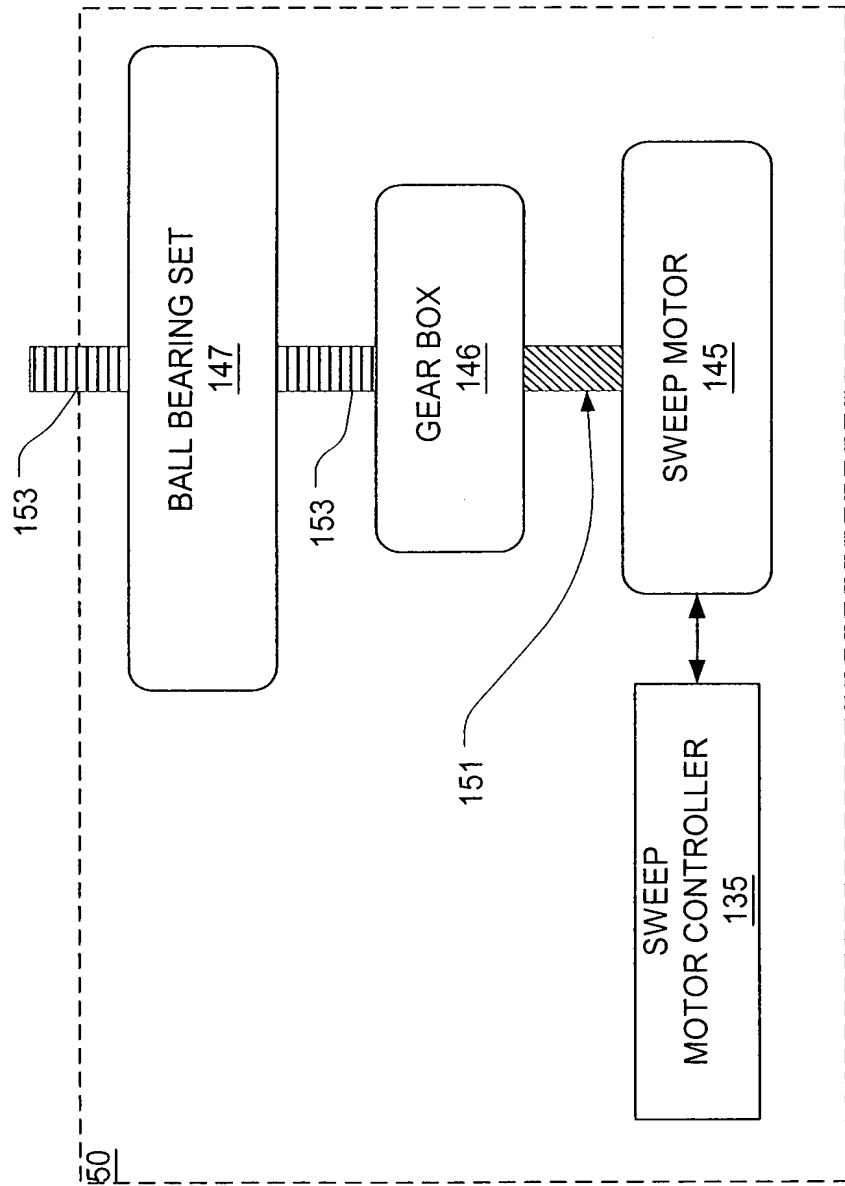


FIG. 9

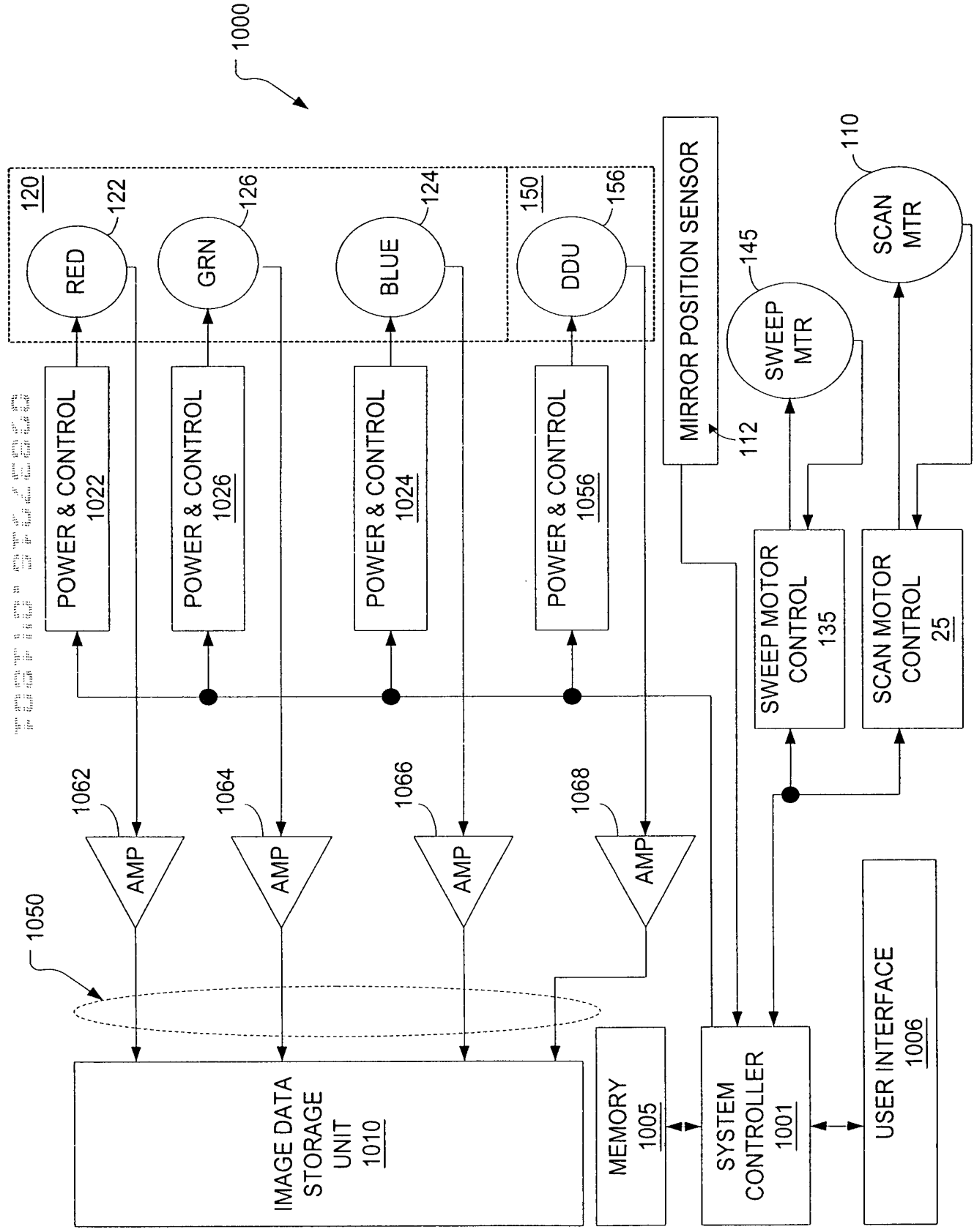


FIG. 10

VISTASCAPE SCANNING CAMERA

File

Edit

View

Options

Setup

Help

1101

1120

1122

1110

1112

1114

1116

1118

16000

0

360

5

355

CAPTURE FORMAT

FILE NAME:

IMAGE 001

RGB

MONOCHROME

IR

IMAGE RESOLUTION:
(in pixels/mirror rotation)

HEAD UNIT

SWEEP START POINT:
(between 0 - 360 degree)

HEAD UNIT

SWEEP STOP POINT:
(between 0 - 360 degree)

MIRROR

CAPTURE START POINT:
(between 0 - 360 degree)

MIRROR

CAPTURE END POINT:
(between 0 - 360 degree)

SETUP- IMAGE CAPTURE CONTROL VARIABLES

FIG. 11

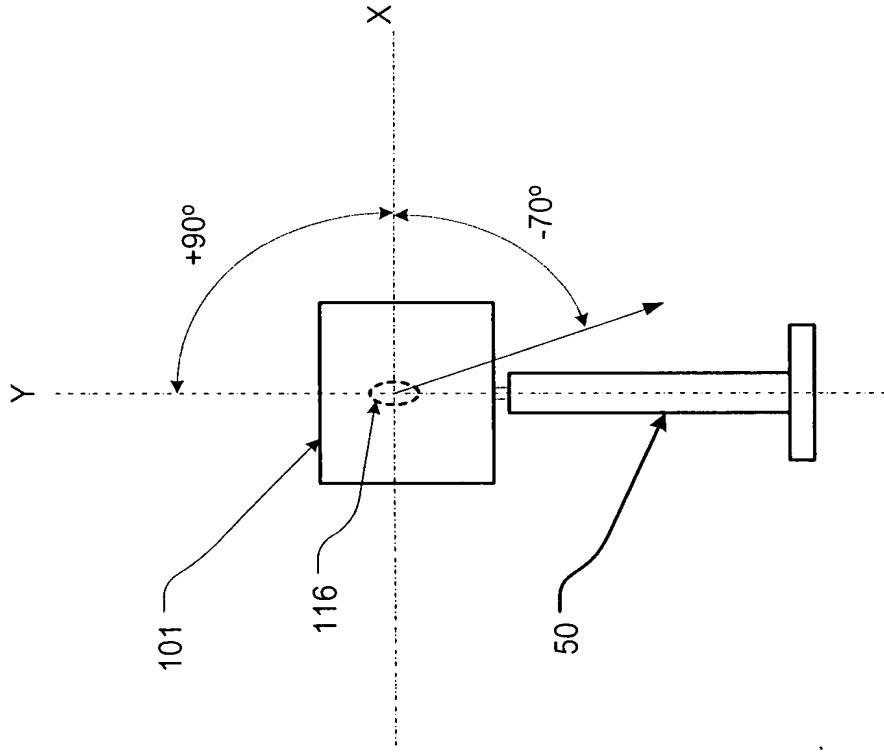


FIG. 12A

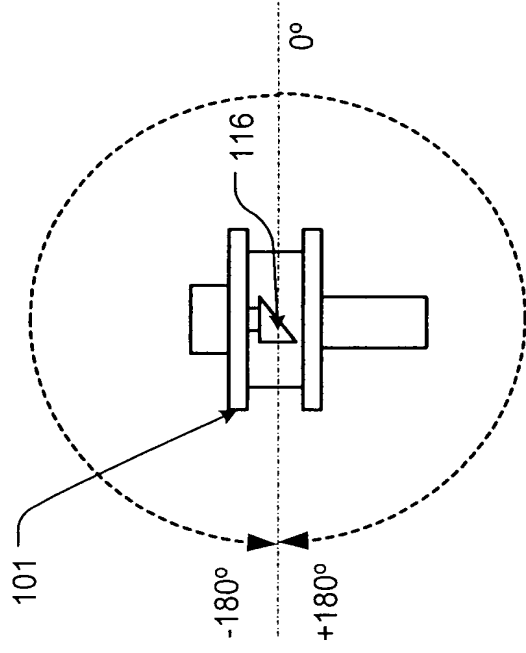


FIG. 12B

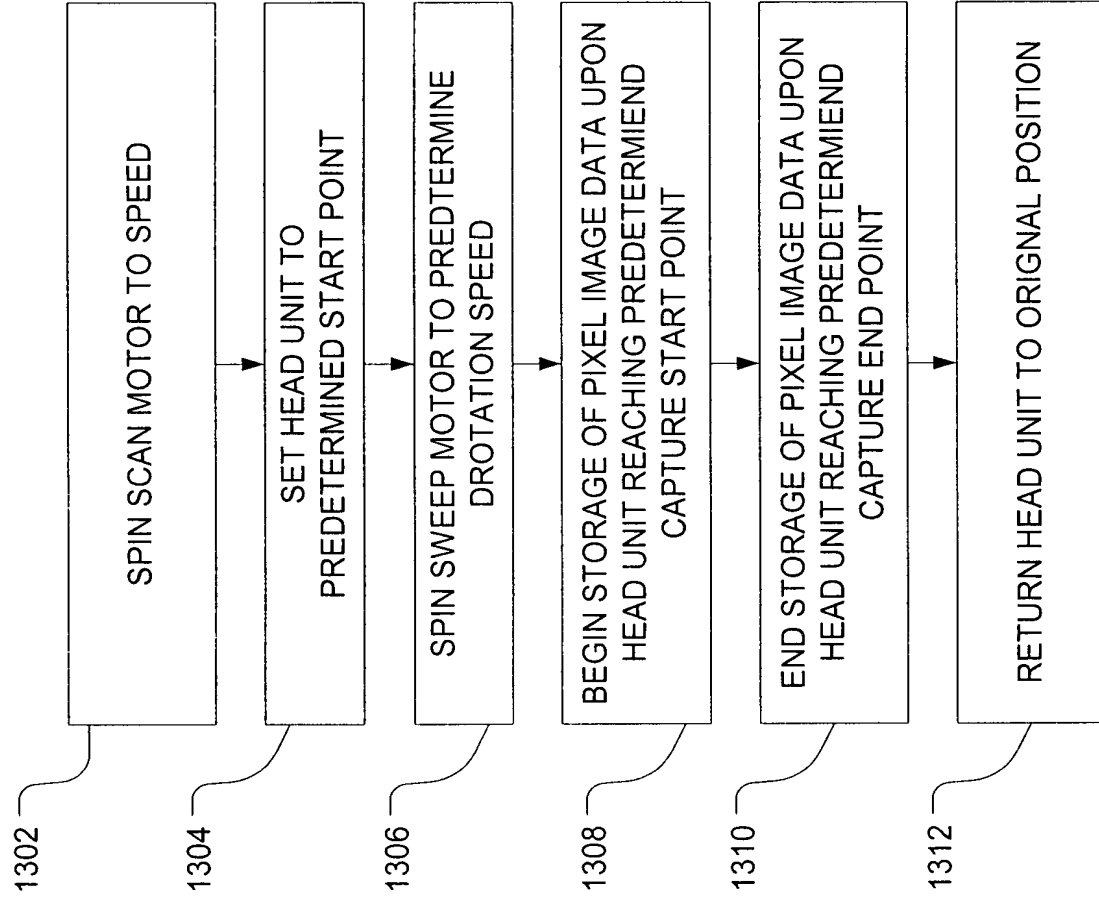


FIG. 13